Claims

1. A bioactive fraction derived from fruit, obtainable by the process including the steps of (1) subjecting said fruit juice to a membrane fraction destabilization step yielding a destabilized fruit juice; (2) subjecting said destabilized fruit juice to a membrane fraction separation step to yield a membrane fraction and a fruit juice supernatant, and (3) subjected said fruit juice supernatant to a stabilizing step to yield stabilized bioactive fraction wherein said fraction comprises less than 25 microgram/kg patulin and less than 0.1% total protein content.

2. The bioactive fraction of claim 1 wherein said fruit is selected from peaches, pears, bananas, plums, apples, pineapples, apricots, cherries, grapes, blueberries, raspberries, blackberries, cranberries, tangerines, prickly pears, nectarines, pomegranates, oranges, grapefruit, tomatoes, and combinations or mixtures thereof.

3. The bioactive fraction of claim 1 wherein said fraction is derived from apple.

4. A composition comprising the bioactive fraction of any one of claims 1 to 3 wherein the composition is a leave-on product selected from the group consisting of cream, dressing, gel, lotion, ointment, liquid, a spray applicator, and combinations thereof, or a wash-off product selected from the group consisting of hand dishwashing detergent, liquid hand soap, bar soap, body wash, shampoo, general purpose cleanser, and combinations thereof.

5. A method for isolating a bioactive fraction that is derived from fruit juice of an Apple (*Pyrus malus*), said method comprising providing fresh fruit of Apple (*Pyrus malus*); processing the fruit under conditions effective to yield a fruit juice least substantially free of protein and patulin, said processing the fresh fruit comprising: (i) separating the fresh fruit into the initial fruit juice and a fiber enriched precipitate; and (ii) subjecting the initial fruit juice to pH adjustment to yield a first fruit juice supernatant and a first precipitate; subjecting said first juice supernatant to microwave treatment to yield a second fruit juice supernatant and a second precipitate and subjecting said second fruit juice supernatant to centrifugation and filtration steps to yield a third fruit juice supernatant and a third precipitate, wherein said third fruit juice supernatant comprises less than 25 microgram/kg patulin and less than 0.1% total protein content.

6. A method for isolating the bioactive fraction of any one of claims 1 to 4 from fruit which comprises processing said fruit to obtain a fruit juice, and subjecting said fruit juice to the following process steps: (1) subjecting said fruit juice to a membrane fraction destabilization step yielding a destabilized fruit juice; (2) subjecting said destabilized fruit juice to a membrane fraction separation step to yield a membrane fraction and a fruit juice supernatant, and (3) subjected said fruit juice supernatant to the stabilizing step to yield stabilized bioactive fraction derived from fruit juice.

7. The method of claim 6 wherein said membrane fraction destabilization step comprises subjecting said fruit juice to electromagnetic waves of from 2.45 GHz up to 7.0 for a time effective to achieve destabilization of the membrane fraction.

8. The method of claim 7 wherein said fruit juice is subjected to electromagnetic waves of from 3.0 GHz up to 6.0 GHz for a time effective to achieve destabilization of the membrane fraction.

9. The method of claim 7 wherein the temperature of said fruit juice during said membrane destabilizing step is maintained below 40°C.

10. The method of claim 7 wherein the temperature of said fruit juice during said membrane destabilizing step is maintained below 35°C.

11. The method of claim 7 wherein the temperature of said fruit juice during said membrane destabilizing step is maintained below 30°C.

12. The method of claim 7 wherein the temperature of said fruit juice during said membrane destabilizing step is maintained below 20°C.

13. The method of any one of claims 7 to 12 wherein the electromagnetic waves necessary to destabilize the fruit juice are generated by a magnetron, power grid tube, klystron, klystrode, crossed-field amplifier, travelling wave tube, and/or a gyrotron.

14. The method of any one of claims 6 to 13 wherein said stabilizing step comprises incubating the bioactive fraction in a mixture of at least one preservative, at least one antioxidant, at least one stabilizer or mixtures or combinations thereof to yield a stabilized bioactive serum fraction.

15. The method of claim 14 wherein said preservatives, antioxidant and/or stabilizers are selected from potassium sorbate, sodium benzoate, sodium metabisulfite, pentylene glycol or mixtures or combinations thereof.